Microsemi
POWER PRODUCTS GROUP

1214-800P

800W PSM - PLUG AND PLAY

- For L-Band Pulsed Radar Application

800 Watts - 300µs, 10%, +50V
L-Band Pulsed Radar 1200 - 1400 MHz

- Easy To Use – 50 Ω Plug-and-Play
- Reduce Design Cycle Time
- Improve System Performance
- Reduce System Size and Components

GENERAL DESCRIPTION

The 1214-800P is a 50 ohm matched high Power Solution Module (PSM) for L-Band pulsed Radar systems capable of providing 800 Watts of pulsed RF output power at three hundreds microsecond pulse width ten percent duty factor across the band 1200-1400 MHz. This PSM is designed with plug and play concept which extremely user friendly and requires no additional tuning and impedance matching from the customer. Mechanical Size is 3.2” x 2” x 0.25”

ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

Symbol	Characteristics	Test Conditions	Min	Typ	Max	Units
Pin	Input Power	Vcc=50V, Pout=800W, Freq=1.2 to 1.4 GHz	80	110	120	W
Gp	Power Gain	Vcc=50V, Pout=800W, Freq=1.2 to 1.4 GHz	8.2	8.6	10.0	dB
ηc	Collector Efficiency	Vcc=50V, Pout=800W, Freq=1.2 to 1.4 GHz	45	52		%
Droop	Pulse Droop	Vcc=50V, Pout=800W, Freq=1.2 to 1.4 GHz		0.1	0.5	dB
R/L	Input Return Loss	Vcc=50V, Pout=800W, Freq=1.2 to 1.4 GHz	10			dB
VSWR-T	Load Mismatch Tolerance	Vcc=50V, Pout=800W, Freq=1.2 to 1.4 GHz			2.0:1	
Θjc	Thermal Resistance	Pulse Width=300uS, Duty=10%			0.15	°C/W

Typical Test Data:

Frequency	Pin (W)	Pout (W)	Ic (A)	RL (dB)	Nc (%)	G (dB)
1200 MHz	**100**	**871**	**3.3**	**-12**	**52**	**9.4**
1300 MHz	**100**	**861**	**3.3**	**-15**	**52**	**9.4**
1400 MHz	**100**	**800**	**3.0**	**-18**	**52**	**9.0**

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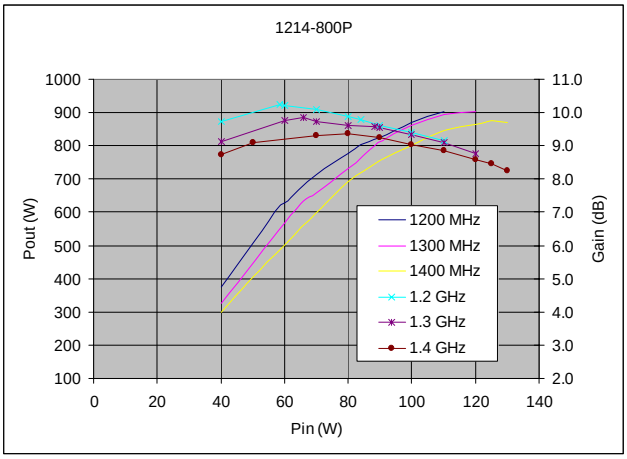
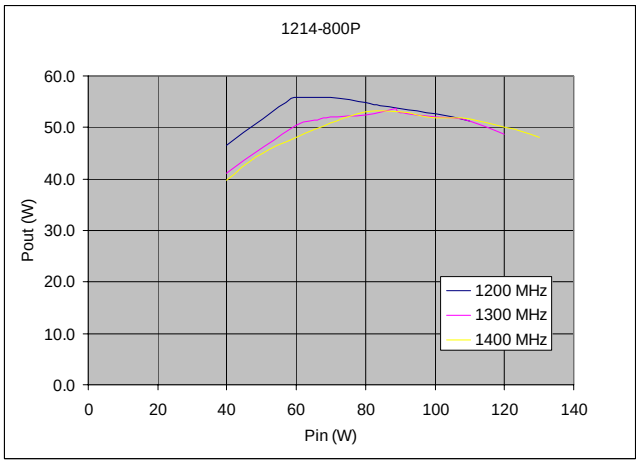
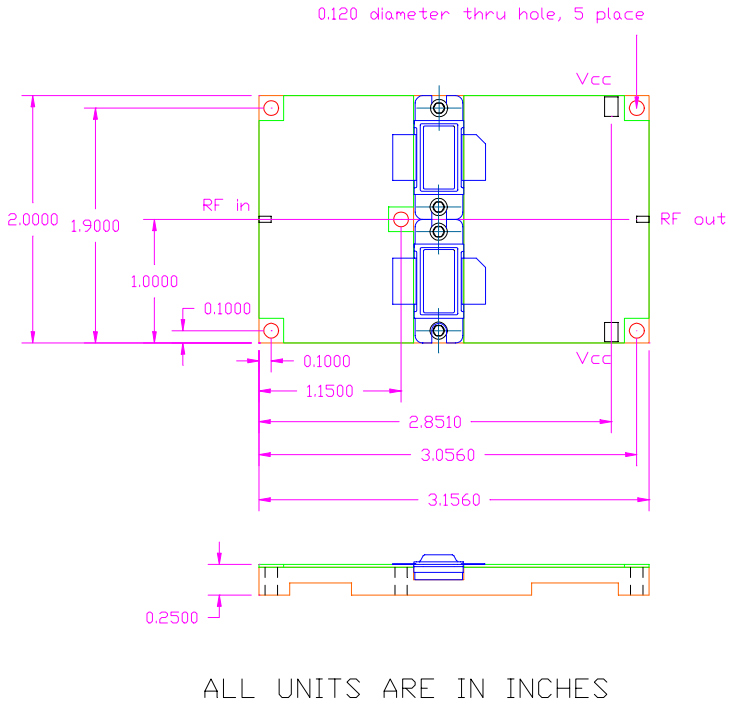
Typical Performance Curves





Pallet Outline Drawing



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